

AWARD/CONTRACT		1. THIS CONTRACT IS A RATED ORDER UNDER DPAS (15 CFR 350)		RATING DO-C9(U)		PAGE OF PAGES 1 14	
2. CONTRACT (PROC. INST. IDENT.) NO. N00014-06-C-0068		3. EFFECTIVE DATE SEE BLOCK 20.C.		4. REQUISITION/PURCHASE REQUEST/PROJECT NO. 05PR11591-00			
5. ISSUED BY OFFICE OF NAVAL RESEARCH ONR 253 HALYNA MUDRI (703)696-0469 E-mail mudrhl@onr.navy.mil 875 North Randolph St. Suite 1425 Arlington VA 22203-1995		CODE N00014		6. ADMINISTERED BY (If other than item 5) DCMA VIRGINIA 10500 Battlevue Parkway Suite 200 Manassas VA 20109-2342		CODE S2404A	
7. NAME AND ADDRESS OF CONTRACTOR (No., street, city, country, State and ZIP Code) METAL STORM INC 4350 FAIRFAX DR STE 810 ARLINGTON VA 22203-1625				8. DELIVERY SEE SECTION F <input type="checkbox"/> FOB ORIGIN <input type="checkbox"/> OTHER (see below)			
				9. DISCOUNT FOR PROMPT PAYMENT N.A.			
				10. SUBMIT INVOICES (4 copies unless otherwise specified) TO THE ADDRESS SHOWN IN: ITEM See Section G			
CODE 3W1H3		FACILITY CODE					
11. SHIP TO/MARK FOR SEE SECTION F - DELIVERIES OR PERFORMANCE		CODE N00014		12. PAYMENT WILL BE MADE BY DFAS COLUMBUS CENTER DFAS CO SOUTH ENTITLEMENT OPERATIONS PO BOX 182264 COLUMBUS OH 43218-2264		CODE HQ0338	
13. AUTHORITY FOR USING OTHER THAN FULL AND OPEN COMPETITION <input type="checkbox"/> 10U.S.C.2304(c)() <input type="checkbox"/> 41U.S.C. 253(C) () N/A				14. ACCOUNTING AND APPROPRIATION DATA SEE ATTACHED FINANCIAL ACCOUNTING DATA (FAD) SHEET(S)			
15A. ITEM NO.		15B. SUPPLIES/SERVICES See Section B of Schedule		15C. QUANTITY		15D. UNIT	
						15E. UNIT PRICE	
						15F. AMOUNT	
				15G. TOTAL AMOUNT OF CONTRACT		See Section B of Schedule	
16. TABLE OF CONTENTS							
(4)	SEC.	PAGE(S)		(4)	SEC.	DESCRIPTION	
PART I - THE SCHEDULE				PART II - CONTRACT CLAUSES			
<input checked="" type="checkbox"/>	A	SOLICITATION/CONTRACT FORM		<input checked="" type="checkbox"/>	I	CONTRACT CLAUSES	
<input checked="" type="checkbox"/>	B	SUPPLIES OR SERVICES AND PRICES/COSTS		<input checked="" type="checkbox"/>	J	LIST OF ATTACHMENTS	
<input checked="" type="checkbox"/>	C	DESCRIPTION/SPECS./WORK STATEMENT		<input checked="" type="checkbox"/>	K	REPRESENTATIONS, CERTIFICATIONS AND OTHER STATEMENTS OF OFFERORS	
<input checked="" type="checkbox"/>	D	PACKAGING AND MARKING		<input checked="" type="checkbox"/>	L	INSTRS., CONDS., AND NOTICES TO OFFERORS	
<input checked="" type="checkbox"/>	E	INSPECTION AND ACCEPTANCE		<input checked="" type="checkbox"/>	M	EVALUATION FACTORS FOR AWARD	
<input checked="" type="checkbox"/>	F	DELIVERIES OR PERFORMANCE					
<input checked="" type="checkbox"/>	G	CONTRACT ADMINISTRATION DATA					
<input checked="" type="checkbox"/>	H	SPECIAL CONTRACT REQUIREMENTS					
CONTRACTING OFFICER WILL COMPLETE ITEM 17 OR 18 AS APPLICABLE							
17. <input checked="" type="checkbox"/> CONTRACTOR'S NEGOTIATED AGREEMENT (Contractor is required to sign this document and return 2 copies to issuing office.) Contractor agrees to furnish and deliver all items or perform all the services set forth or otherwise identified above and on any continuation sheets for the consideration stated herein. The rights and obligations of the parties to this contract shall be subject to and governed by the following documents: (a) this award/contract, (b) the solicitation, if an, and (c) such provisions, representations, certifications, and specifications, as are attached or incorporated by reference herein. (Attachments are listed herein.)				18. <input type="checkbox"/> AWARD (Contractor is not required to sign this document.) Your offer on Solicitation Number , including the additions or changes made by you which additions or changes are set forth in full above, is hereby accepted as to items listed above and on any continuation sheets. This award consummates the contract which consists of the following documents: (a) the Government's solicitation and your offer, and (b) this award/contract. No further document is necessary.			
19A. NAME AND TITLE OF SIGNER (Type or print) DAVID A. SMITH CHIEF EXECUTIVE OFFICER				20A. NAME OF CONTRACTING OFFICER MARK W. CHADWICK Contracting Officer			
19B. NAME OF CONTRACTOR (b) (6)		19C. DATE SIGNED 30 Nov 2005		20B. UNITED STATES OF AMERICA (b) (6)		20C. DATE SIGNED 11/30/05	
BY (Signature of person authorized to sign)				BY (Signature of Contracting Officer)			

SECTION B - SUPPLIES OR SERVICES AND PRICES/COSTS

ITEM NO.	SUPPLIES/SERVICES	ESTIMATED COST	FIXED FEE	TOTAL ESTIMATED COST & FIXED FEE
0001	The Contractor shall furnish the necessary personnel and facilities to conduct the research effort as described in Section C and provide reports and data in accordance with Exhibit A. ACRN AA \$696,000	\$915,444	\$73,235	\$988,679
0002	Weapon pod on Government owned platform (Weapon system from Demonstration of Live Fire Test of Objective 2) in accordance with SOW 3.4	NSP	NSP	NSP
TOTAL ESTIMATED CONTRACT CONSIDERATION:		\$915,444	\$73,235	\$988,679

SECTION C - DESCRIPTION/SPECIFICATIONS/WORK STATEMENT

1. The research effort to be performed hereunder shall be subject to the requirements and standards contained in Exhibit A and the following paragraph(s).
2. The Contractor shall conduct the research effort under CLIN 0001, submitted under SBIR Topic Number N04-902, in accordance with tasks 1 - 4 of Attachment Number 1, entitled "Statement of Work".

SECTION D - PACKAGING AND MARKING

Preservation, packaging, packing and marking of all deliverable contract line items shall conform to normal commercial packing standards to assure safe delivery at destination.

All reports, briefs, technical documents, etc. submitted to the Government under this contract should contain the following legend:

SBIR or STTR DATA RIGHTS

Topic Number: N04-902

Contract No.: N00014-06-C-0068

Contractor Name: METAL STORM INC

Contractor Address: 4350 FAIRFAX DR STE 810
ARLINGTON VA 22203-1625

The Government's rights to use, modify, reproduce, release, perform, display, or disclose technical data or computer software marked with this legend are restricted as provided in paragraph (b)(4) of DFARS 252-227-7018, Rights in Noncommercial Technical Data and Computer Software--Small Business Innovative Research (SBIR) Program.

SECTION E - INSPECTION AND ACCEPTANCE

Inspection and acceptance of the final delivery under this contract will be accomplished by the Program Officer designated in Section F of this contract, who shall have thirty (30) days after contractual delivery for acceptance.

SECTION F - DELIVERIES OR PERFORMANCE

1. The research effort performed under CLIN 0001 shall be conducted from date of contract award through 20 months.

2. Distribution, consignment and marking instructions for all contract line items shall be in accordance with Enclosure Number 1 of Exhibit A. The address for the cognizant Program Officer is as follows:

Program Officer
Office of Naval Research
875 North Randolph St. Suite 1425
Arlington, Virginia 22203-1995

Attn: Clifford Bedford Code: 351
Ref: Contract N00014-05-C-0533

SECTION G - CONTRACT ADMINISTRATION DATA (02/14/05)

1. PAYMENT AND INVOICE INSTRUCTIONS (COST REIMBURSEMENT)

1.1 Submission of Invoices

PAYMENT AND INVOICE INSTRUCTIONS (COST TYPE)

The Office of Naval Research will utilize the new DoD Wide Area Workflow Receipt and Acceptance (WAWF) system. This web based system located at <https://wawf.eb.mil> provides the technology for government contractors and authorized Department of Defense (DoD) personnel to generate, capture and process receipt and payment-related documentation in a paperless environment. Invoices for supplies/services rendered under this contract shall be submitted electronically through WAWF. Submission of hard copy DD250/Invoice/Public Vouchers (SF1034) will no longer be accepted for payment.

It is recommended that the person in your company designated as the Central Contractor Registration (CCR) Electronic Business (EB) Point of Contact and anyone responsible for the submission of invoices, use the online training system for WAWF at <http://wawftraining.com>. The Vendor, Group Administrator (GAM), and sections marked with an asterisk in the training system should be reviewed. Vendor Quick Reference Guides are also available at <http://www.acquisition.navy.mil/navyaos/content/view/full/3521/>. The most useful guides are "Getting Started for Vendors", "WAWF Vendor Guide", and "Creating a Cost Voucher Invoice."

The designated CCR EB point of contact is responsible for activating the company's CAGE code on WAWF by calling 1-866-618-5988. Once the company is activated, the CCR EB will self-register on the WAWF and follow the instructions for a group administrator. After the company is set-up on WAWF, any additional persons responsible for submitting invoices must self-register at the WAWF <https://wawf.eb.mil>.

The following required information should automatically fill-in via WAWF; if it does not fill-in, include the following:

Issue By DODAAC: N00014 Admin DODAAC: [Use the 6 character "ADMINISTERED BY" CODE as listed on page one of the award document]

Pay DODAAC: [Use the 6 character "PAYMENT WILL BE MADE BY" CODE as listed on page one of the award document]

Fill-in the following additional information:

DCAA Auditor DODAAC: [Look up via the AUDIT OFFICE LOCATOR at <http://www.dcaa.mil>. If you encounter any problems finding your cognizant audit office, write to dcaaweb@dcaa.mil or call ONR's DCAA liaison at (703)696-2603]

Service Approver DODAAC: N00014

The following additional information may need to be filled in:

LPO DODAAC: N00014 (Note - this line is required only when the "PAYMENT WILL BE MADE BY" DODAAC begins with an 'N')

After self-registering and logging on to the WAWF system, click on the plus sign next to the word "Vendor" and then click on the "Create New Document" link. Enter the contract number, cage code, and Pay DODAAC (above) and hit submit. Select the "Cost Voucher" invoice type within WAWF-RA. This type of invoice fulfills any requirement for submission of the Material Inspection and Receiving Report, DD Form 250. Back up documentation, 5MB limit, can be included and attached to the invoice in WAWF under the "Misc Info" tab. Fill-in all applicable information under each tab.

Take special care when you enter Line Item information - the Line Item tab is where you will detail your request for payment and material/services that were provided based upon the contract. Be sure to fill in the following two informational items exactly as they appear in the contract:

Item Number: If the contract schedule has more than one ACRN listed as sub items under the applicable Contract Line Item Number (CLIN), use the 6 character separately identified Sub Line Item Number (SLIN) (e.g. - 0001AA) or Informational SLIN (e.g. - 000101), otherwise use the 4 character CLIN (e.g. - 0001).

ACRN: Fill-in the applicable 2 alpha character ACRN that is associated with the SLIN or CLIN. (Note - DO NOT INVOICE FOR MORE THAN IS STILL AVAILABLE UNDER ANY ACRN).

Special Payment Instructions for CLIN/SLINs with Multiple ACRNs/Lines of Accounting: (Note - since WAWF does not accept the use of multiple ACRNs for any single CLIN or SLIN on one invoice; multiple invoices may have to be used - use the WAWF "Line Item" "Description" area to note the use of multiple invoices). For all invoices submitted against CLINs with multiple Accounting Classification Reference Numbers (ACRNs), the billing shall be paid from the earliest Fiscal Year (FY)

appropriation first. Fiscal Year is determined from the 3rd character in the "Appropriation (Critical)" part (Block 6B) of the Line of Accounting on the Financial Accounting Data Sheet of the contract (e.g., 1741319 for FY 2004 and 1751319 for FY 2005). In the event there are multiple ACRNs with the same FY of appropriation, billings shall be proportionally billed to all ACRNs for that FY in the same ratio that the ACRNs are obligated.

After all required information is included, click on the "Submit" button under the "Header" tab.

Helpful Note: Shipment Number format should be three alpha and 4 numeric (e.g., SER0001).

Note: The contractor shall submit invoices for payment per contract terms and the Government shall process invoices for payment per contract terms.

If you have any questions regarding the WAWF, please contact the DoN WAWF Assistance Line at 1-866-618-5988.

1.2 Payment of Allowable Costs and Fixed Fee

As consideration for the proper performance of the work and services required under this contract, the Contractor shall be paid as follows:

(a) Costs, as provided for under the contract clause entitled "Allowable Cost and Payment," shall not exceed the amount set forth as "Estimated Cost" in Section B, and is subject to the contract clause entitled "Limitation of Cost" or "Limitation of Funds" whichever is applicable.

(b) A fixed fee, in the amount set forth as 'Fixed Fee' in Section B, in accordance with the contract clause FAR 52.216-8 "Fixed Fee", shall be paid upon completion of the work and services required under this contract and upon final acceptance by the Contracting Officer. However, the Contractor, shall bill on each voucher the amount of the fee bearing the same percentage to the total fixed fee as the amount of cost billed bears to the total estimated cost not to exceed the amount set forth as "Fixed Fee" in Section B. The total fixed fee billed,

shall not exceed the total fixed fee specified in Section B and is subject to the contract clause entitled "Limitation of Cost" or "Limitation of Funds" whichever applies.

(c) In accordance with FAR 52.216-8, and in order to protect the Government's interest, the Contractor is hereby directed to withhold 10% of the fixed fee amount as set forth in Section B or until a reserve is set aside in the amount of \$100,000, whichever is less. The Administrative Contracting Officer shall release 75% of the fixed fee reserve upon acceptance of the final deliverables identified in Section F of this contract. The remainder 25% of the fixed fee reserve will be released after completion of any final audits, submission of the final patent and royalty reports and if the contractor is not delinquent in submitting final vouchers for prior years' settlements.

1.3 Allotment of Funds

(a) It is hereby understood and agreed that this contract will not exceed a total amount of \$988,679; including an estimated cost of \$915,444 and a fixed fee of \$73,235.

(b) It is hereby understood and agreed that CLIN 0001 will not exceed a total amount of \$988,679; including an estimated cost of \$915,444 and a fixed fee of \$73,235. The total amount presently available for payment and allotted to CLIN 0001 of this contract is \$696,000; including an estimated cost of \$644,445 and a fixed fee of \$51,555. It is estimated that the amount allotted of \$696,000 will cover the period from date of award through 14 months.

2. PROCURING OFFICE REPRESENTATIVES

(a) In order to expedite administration of this contract, the Administrative Contracting Officer should direct inquiries to the appropriate office listed below. Please do not direct routine inquiries to the person listed in Item 20A on Standard Form 26.

Contract Negotiator – Halyna Mudri, ONR 253, (703)696-0469, DSN 426-0469, E-Mail Address mudrih@onr.navy.mil

Inspection and Acceptance – Clifford Bedford, ONR 351, (703)696-0437, DSN 426-0437, E-Mail Address bedforc@onr.navy.mil

Security Matters – Ms. Sheila Neal, ONR 43, (703) 696-8177, DSN 426-8177

Patent Matters - Mr. Tom McDonnell, ONR 00CC, (703) 696-4000, DSN 426-4000.

(b) The Administrative Contracting Officer will forward invention disclosures and reports directly to Corporate Counsel (Code 00CC), Office of Naval Research, Department of the Navy, 875 North Randolph St. Suite 1425, Arlington, VA 22203-1995. The Corporate Counsel will return the reports along with a recommendation to the Administrative Contracting Officer. The Corporate Counsel will represent the Contracting Officer with regard to invention reporting matters arising under this contract.

3. TYPE OF CONTRACT

This is a cost-plus-fixed-fee completion contract.

SECTION H - SPECIAL CONTRACT REQUIREMENTS

1. ONR 5252.235-9714 REPORT PREPARATION (FEB 2002)

Scientific or technical reports prepared by the Contractor and deliverable under the terms of this contract will be prepared in accordance with format requirements contained in ANSI/NISO Z39.18-1995, Scientific and Technical Reports: Elements, Organization, and Design.

[NOTE: All NISO American National Standards are available as free, downloadable PDF(s) at

<http://www.niso.org/standards/index.html>. NISO standards can also be purchased in hardcopy form from NISO Press Fulfillment, P. O. Box 451, Annapolis Junction, MD 20701-0451 USA. Telephone U.S. and Canada: (877) 736-6476; Outside the U.S. and Canada: 301-362-6904; Fax: 301-206-9789.]

2. INVENTION DISCLOSURES AND REPORTS

The Contractor shall submit all invention disclosures and reports required by the Patent Rights clause of this contract to the Administrative Contracting Officer (ACO). The ACO (Refer to Block 6 of the SF Form 26 for POC information) will forward invention disclosures and reports directly to Corporate Counsel (Code 00CC), Office of Naval Research, Department of the Navy, Arlington, VA 22203. Corporate Counsel will return the reports along with a recommendation to the ACO. Corporate Counsel represents the Contracting Officer regarding invention reporting matters arising under this contract.

3. ELECTRONIC SUBMISSION OF INTERIM AND FINAL REPORTS

In addition to the complete hard copy of the fourth status report (which should be at the end of the first year) and the Final Report, the contractor shall provide a NONPROPRIETARY summary of these reports directly to the Navy SBIR/STTR Web Welcome page at www.navysbir.com. To submit these reports, select Submission, then select Submit a Phase I or II Summary Report, then select Begin Submission Process. Enter your firm name and the password used to submit proposals to the DoD Proposal Submission website. Select Summary Report and Add a New Report. Follow the remaining instructions given on the submission website.

4. ONR 5252.219-9717 SPECIAL SMALL BUSINESS INNOVATION RESEARCH (SBIR) REQUIREMENTS (DEC 1988)

A minimum of one-half of the SBIR Project shall be carried out by the proposing firm. The primary employment of the principal investigator shall be with the Contractor at the time of award and during the conduct of the proposed effort.

Primary employment means that more than one-half of the principal investigator's time is spent with the Contractor. Deviations from the above requirements shall be approved in writing by the Contracting Officer.

The research or research and development work under this contract shall be performed by the Contractor in the United States. "United States" means the several states, the Territories and possessions of the United States, the Commonwealth of Puerto Rico, and the Commonwealth of the Northern Mariana Islands, the Trust Territory of the Pacific Islands, and the District of Columbia.

5. ONR 5252.242-9718 TECHNICAL DIRECTION (FEB 2002)

(a) Performance of the work hereunder is subject to the technical direction of the Program Officer/COR designated in this contract, or duly authorized representative. For the purposes of this clause, technical direction includes the following:

(1) Direction to the Contractor which shifts work emphasis between work areas or tasks, requires pursuit of certain lines of inquiry, fills in details or otherwise serves to accomplish the objectives described in the statement of work;

(2) Guidelines to the Contractor which assist in the interpretation of drawings, specifications or technical portions of the work description.

(b) Technical direction must be within the general scope of work stated in the contract. Technical direction may not be used to:

- (1) Assign additional work under the contract;
- (2) Direct a change as defined in the contract clause entitled "Changes";

- (3) Increase or decrease the estimated contract cost, the fixed fee, or the time required for contract performance;
- (4) Change any of the terms, conditions or specifications of the contract.

(c) The only individual authorized to in any way amend or modify any of the terms of this contract shall be the Contracting Officer. When, in the opinion of the Contractor, any technical direction calls for effort outside the scope of the contract or inconsistent with this special provision, the Contractor shall notify the Contracting Officer in writing within ten working days after its receipt. The Contractor shall not proceed with the work affected by the technical direction until the Contractor is notified by the Contracting Officer that the technical direction is within the scope of the contract.

(d) Nothing in the foregoing paragraphs may be construed to excuse the Contractor from performing that portion of the work statement which is not affected by the disputed technical direction.

6. ONR 5252.237-9705 KEY PERSONNEL (DEC 1988)

(a) The Contractor agrees to assign to the contract tasks those persons whose resumes were submitted with its proposal and who are necessary to fulfill the requirements of the contract as "key personnel". No substitutions may be made except in accordance with this clause.

(b) The Contractor understands that during the first ninety (90) days of the contract performance period, no personnel substitutions will be permitted unless these substitutions are unavoidable because of the incumbent's sudden illness, death or termination of employment. In any of these events, the Contractor shall promptly notify the Contracting Officer and provide the information described in paragraph (c) below. After the initial ninety (90) day period the Contractor must submit to the Contracting Officer all proposed substitutions, in writing, at least (30) days in advance ((45) days if security clearance must be obtained) of any proposed substitution and provide the information required by paragraph (c) below.

(c) Any request for substitution must include a detailed explanation of the circumstances necessitating the proposed substitution, a resume for the proposed substitute, and any other information requested by the Contracting Officer. Any proposed substitute must have qualifications equal to or superior to the qualifications of the incumbent. The Contracting Officer or his/her authorized representative will evaluate such requests and promptly notify the Contractor in writing of his/her approval or disapproval thereof.

(d) In the event that any of the identified key personnel cease to perform under the contract and the substitute is disapproved, the contract may be immediately terminated in accordance with the Termination clause of the contract.

The following are identified as key personnel:

Labor Category	First/M/Last Name
Principal Investigator	(b) (6)
Subject Matter Expert	(b) (6)

7. PERFORMANCE OF AMMUNITION AND EXPLOSIVE TESTING

The performance of ammunition and explosive testing will be conducted at a approved DoD Government facility. The Contractor agrees not to change the place of performance to a contractor facility without the advance written approval of the Contracting Officer. Contracting Officer's approval shall be based on the Contractor's compliance with the requirements of the DoD Contractors' Safety Manual for Ammunition and Explosives, DoD 4145.26-M; the Contractor's compliance with any other additional requirements included in the schedule of this contract; Government access to the Contractor's facilities, personnel, and safety program documentation.

SECTION I - CONTRACT CLAUSES

Cost-Plus-Fixed Fee (SBIR-STTR phase II/III) (August 29, 2005)

- * Applies when contract action exceeds \$10,000
- ** Applies when contract action exceeds \$100,000
- + Applies when contract action exceeds \$500,000
- ++ Applies when contract action exceeds \$500,000 and subcontracting possibilities exist. Small Business Exempt.
- x (DD 250)

All clauses in the Section (A) Tables are required clauses and are applicable, or are applicable at the specified thresholds as designated in accordance with the legend listed above.

(A) FAR 52.252-02 CLAUSES INCORPORATED BY REFERENCE (FEB 1998)

This contract incorporates one or more clauses by reference, with the same force and effect as if they were given in full text. Upon request, the Contracting Officer will make their full text available. Also, the full text of a clause may be accessed electronically at this address: <http://www.arnet.gov/far/>

I. FEDERAL ACQUISITION REGULATION (FAR) (48 CFR CHAPTER 1) CLAUSES:

**	FAR 52.202-1	Definitions (JUL 2004)
**	FAR 52.203-3	Gratuities (APR 1984)
**	FAR 52.203-5	Covenant Against Contingent Fees (APR 1984)
**	FAR 52.203-6	Restrictions on Subcontractor Sales to the Government (JUL 1995)
**	FAR 52.203-7	Anti-Kickback Procedures (JUL 1995)
**	FAR 52.203-8	Cancellation, Rescission, and Recovery of Funds for Illegal or Improper Activity (JAN 1997)
**	FAR 52.203-10	Price or Fee Adjustment for Illegal or Improper Activity (JAN 1997)
**	FAR 52.203-12	Limitation on Payments to Influence Certain Federal Transactions (JUN 2003)
**	FAR 52.204-4	Printing/Copying Double-Sided on Recycled Paper (AUG 2000)
	FAR 52.204-7	Central Contractor Registration (OCT 2003)
	FAR 52.211-15	Defense Priority and Allocation Requirements (SEP 1990)
**	FAR 52.215-2	Audit and Records - Negotiation (JUN 1999) and Alternate II (APR 1998) (Alternate II is only applicable with cost reimbursement contracts with State and local Governments, educational institutions, and other non-profit organizations.)
	FAR 52.215-8	Order of Precedence - Uniform Contract Format (OCT 1997)
+	FAR 52.215-10	Price Reduction for the Defective Cost or Pricing Data (OCT 1997) (The provisions of this Clause have been waived by a joint Determination and Findings for the prime contractor only. The clause is applicable to subcontracts over \$550,000.)
+	FAR 52.215-12	Subcontractor Cost or Pricing Data (OCT 1997) (Applicable to subcontracts over \$550,000 only)
**	FAR 52.215-14	Integrity of Unit Prices (OCT 1997) and Alternate I (OCT 1997) (Alternate I is applicable if the action is contracted under Other Than Full and Open Competition)
+	FAR 52.215-15	Pension Adjustments and Asset Reversions (OCT 2004)
	FAR 52.215-17	Waiver of Facilities Capital Cost of Money (OCT 1997)

+	FAR 52.215-18	Reversion or Adjustment of Plans for Postretirement Benefits (PRB) Other than Pensions (JUL 2005)
+	FAR 52.215-19	Notification of Ownership Changes (OCT 1997) (Applicable when Cost or Pricing Data is required)
	FAR 52.216-7	Allowable Cost and Payment (DEC 2002)
	FAR 52.216-8	Fixed Fee (MAR 1997)
**	FAR 52.219-4	Notice of Price Evaluation Preference for HUB zone Small Business Concerns (JUL 2005)
	FAR 52.219-6	Notice of Total Small Business Set-Aside (JUN 2003)
**	FAR 52.219-8	Utilization of Small Business Concerns (MAY 2004)
++	FAR 52.219-9	Small Business Subcontracting Plan (JUL 2005)
**	FAR 52.219-14	Limitations on Subcontracting (DEC 1996)
++	FAR 52.219-16	Liquidated Damages - Subcontracting Plan (JAN 1999)
	FAR 52.222-1	Notice to the Government of Labor Disputes (FEB 1997)
**	FAR 52.222-2	Payment for Overtime Premiums (JUL 1990) (Note: The word "zero" is inserted in the blank space indicated by an asterisk)
	FAR 52.222-3	Convict Labor (JUN 2003) (Reserved when FAR 52.222-20 Walsh Healy Public Contracts Act is applicable)
**	FAR 52.222-4	Contract Work Hours and Safety Standards Act - Overtime Compensation (JUL 2005)
	FAR 52.222-21	Prohibition of Segregated Facilities (FEB 1999)
	FAR 52.222-26	Equal Opportunity (APR 2002)
*	FAR 52.222-35	Equal Opportunity for Special Disabled Veterans, Veterans of the Vietnam Era, and Other Eligible Veterans (DEC 2001)
*	FAR 52.222-36	Affirmative Action for Workers with Disabilities (JUN 1998)
*	FAR 52.222-37	Employment Reports on Special Disabled Veterans, Veterans of the Vietnam Era, and Other Eligible Veterans (DEC 2001)
**	FAR 52.223-14	Toxic Chemical Release Reporting (AUG 2003)
	FAR 52.225-13	Restrictions on Certain Foreign Purchases (MAR 2005)
	FAR 52.225-16	Sanctioned European Union Country Services (FEB 2000)
**	FAR 52.227-1	Authorization and Consent (JUL 1995) and Alternate I (APR 1984)
**	FAR 52.227-2	Notice and Assistance Regarding Patent and Copyright Infringement (AUG 1996)
	FAR 52.227-20	Rights in Data – SBIR Program (MAR 1994)
	FAR 52.228-7	Insurance Liability to Third Persons (MAR 1996) (Further to paragraph (a)(3), unless otherwise stated in this contract, types and limits of insurance required are as stated in FAR 28.307-2)
	FAR 52.232-9	Limitation on Withholding of Payments (APR 1984)
**	FAR 52.232-17	Interest (JUN 1996)
	FAR 52.232-23	Assignment of Claims (JAN 1986) and Alternate I (APR 1984)
	FAR 52.232-25	Prompt Payment (OCT 2003) and Alternate I (FEB 2002) (The words "the 30 th day" are inserted in lieu of "the 7 th day" at (a)(5)(i). [When Alternate I is applicable (a)(5)(i) does not apply] [Use Alternate I when awarding a cost reimbursement contract for services])
	FAR 52.232-33	Payment by Electronic Funds Transfer - Central Contractor Registration (OCT 2003)
	FAR 52.233-1	Disputes (JULY 2002)
	FAR 52.233-3	Protest After Award (AUG 1996) and Alternate I (JUN 1985)
	FAR 52.242-1	Notice of Intent to Disallow Costs (APR 1984)
+	FAR 52.242-3	Penalties for Unallowable Costs (MAY 2001)

	FAR 52.242-4	Certification of Final Indirect Costs (JAN 1997)
**	FAR 52.242-13	Bankruptcy (JUL 1995)
	FAR 52.242-15	Stop Work Order (AUG 1989) and Alternate I (APR 1984)
	FAR 52.243-2	Changes -- Cost-Reimbursement (Aug. 1987) and Alternate V (APR 1984)
	FAR 52.244-2	Subcontracts (MAY 2005) and Alternate I (AUG 1998)
**	FAR 52.244-5	Competition in Subcontracting (DEC 1996)
	FAR 52.244-6	Subcontracts for Commercial Items and Commercial Components (DEC 2004)
	FAR 52.245-5	Government Property (Cost-Reimbursement, Time-and-Materials, or Labor-Hour Contracts) (May 2004) and ALT I (JUN 2003) (As modified by DoD Class Deviation 99-00008 dated 13 July 1999) (ALT I is applicable if the contractor is a nonprofit organization whose primary purpose is the conduct of scientific research)
	FAR 52.246-9	Inspection of Research and Development (Short Form) (Apr 1984)
	FAR 52.246-23	Limitation of Liability (FEB 1997)
**	FAR 52.247-64	Preference for Privately Owned U.S. Flag Commercial Vessels (APR 2003)
	FAR 52.249-6	Termination (Cost-Reimbursement) (May 2004)
	FAR 52.249-14	Excusable Delays (APR 1984)
	FAR 52.251-1	Government Supply Sources (APR 1984)
	FAR 52.253-1	Computer Generated Forms (JAN 1991)

II. DEPARTMENT OF DEFENSE FAR SUPPLEMENTAL (DFARS) (48 CFR CHAPTER 2) CLAUSES:

**	DFARS 252.203-7001	Prohibition On Persons Convicted of Fraud or Other Defense-Contract-Related Felonies (DEC 2004)
	DFARS 252.204-7003	Control of Government Work Product (APR 1992)
	DFARS 252.204-7004	Alternate A (NOV 2003)
**	DFARS 252.209-7004	Subcontracting with Firms That Are Owned or Controlled by the Government of a Terrorist Country (MAR 1998)
+	DFARS 252.215-7000	Pricing Adjustments (DEC 1991)
++	DFARS 252.219-7003	Small, Small Disadvantaged and Women-owned Small Business Subcontracting Plan (DoD Contracts) (APR 1996)
	DFARS 252.225-7004	Reporting of Contract Performance Outside the United States (JUN 2005)
**	DFARS 252.225-7012	Preference for Certain Domestic (JUN 2004)
	DFARS 252.225-7031	Secondary Arab Boycott of Israel (JUN 2005)
	DFARS 252.227-7016	Rights In Bid Or Proposal Information (JUN 1995)
	DFARS 252.227-7017	Identification And Assertion Of Use, Release, Or Disclosure Restrictions (JUN 1995)
	DFARS 252.227-7018	Rights In Noncommercial Technical Data And Computer Software--Small Business Innovation Research (SBIR) Program (JUN 1995)
	DFARS 252.227-7019	Validation Of Asserted Restrictions--Computer Software (JUN 1995)
	DFARS 252.227-7025	Limitations on the Use or Disclosure of Government-Furnished Information Marked with Restrictive Legends (JUN 1995)
	DFARS 252.227-7028	Technical Data or Computer Software Previously Delivered to the Government (JUN 1995)
	DFARS 252.227-7030	Technical Data -- Withholding of Payment (MAR 2000)

	DFARS 252.227-7037	Validation of Restrictive Markings on Technical Data (SEP 1999)
	DFARS 252.231-7000	Supplemental Cost Principles (DEC 1991)
	DFARS 252.232-7003	Electronic Submissions of Payment Requests (JAN 2004)
	DFARS 252.235-7002	Animal Welfare (DEC 1991)
	DFARS 252.235-7011	Final Scientific or Technical Report (NOV 2004)
	DFARS 252.242-7000	Post-Award Conference (DEC 1991)
**	DFARS 252.243-7002	Requests for Equitable Adjustment (MAR 1998)
	DFARS 252.245-7001	Reports of Government Property (MAY 1994)
X	DFARS 252.246-7000	Material Inspection and Receiving Report (MAR 2003)
**	DFARS 252.247-7023	Transportation of Supplies by Sea (MAY 2002)
	DFARS 252.247-7024	Notification of Transportation of Supplies by Sea (MAR 2000) (Applicable when the Contractor has made a negative response to the inquiry in the representation at DFARS 252.247-7022.)
	DFARS 252.251-7000	Ordering from Government Supply Sources (NOV 2004)

(B) ADDITIONAL FAR AND DFARS CLAUSES

This contract incorporates one or more clauses by reference as indicated by the mark of (X), with the same force and effect as if they were given in full text. Upon request, the Contracting Officer will make their full text available. Also, the full text of a clause may be accessed electronically at this address: <http://www.arnet.gov/far/>

	FAR 52.204-2	Security Requirements (AUG 1996) (Applicable if contract will generate or require access to classified information and DD Form 254, Contract Security Classification Specification, is issued to the contractor)
x	FAR 52.209-6	Protecting the Government's Interest when Subcontracting with Contractors Debarred, Suspended, or Proposed for Debarment (JAN 2005) (Applicable to contracts exceeding \$25,000 in value.)
	FAR 52.215-16	Facilities Capital Cost of Money (Jun 2003) (Applicable in solicitations expected to result in contracts that are subject to the cost principles for contracts with commercial organizations)
x	FAR 52.215-17	Waiver of Facilities Capital Cost of Money (Use if FAR52.215-16 is not applicable)
x	FAR 52.215-21	Requirements for Cost or Pricing Data or Information Other Than Cost or Pricing Data – Modifications (OCT 1997) (Applicable if cost or pricing data or information other than cost or pricing data will be required for modifications)
	FAR 52.217-9	Option to Extend the Term of the Contract (MAR 2000) (In paragraph (a), insert "period of time" and "number of days"; and in paragraph (c), insert "month and years") (Applicable if contract contains line item(s) for option(s))
	FAR 52.219-3	Notice of Total HUB Zone Set-Aside (JAN 1999)
	FAR 52.219-5	Very Small Business Set-Aside (JUN 2003) (For actions between \$2,500 and \$50,000)
	FAR 52.219-7	Notice of Partial Small Business Set-Aside (JUN 2003) and Alternate I (OCT 1995)

	FAR 52.219-10	Incentive Subcontracting Program (OCT 2001) (Applicable to contract actions exceeding \$500,000 and when subcontracting possibilities exist. The clause is small business exempt) (In paragraph (b), insert the appropriate number between 0 and 10 – "XX") (Complete the space in the parentheses)
	FAR 52.219-25	Small Disadvantaged Business Participation Program - Disadvantaged Status and Reporting (OCT 1999) (Applicable if contract includes FAR 52.219-24)
	FAR 52.219-26	Small Disadvantaged Business Participation Program - Incentive Subcontracting Program (OCT 2000) (Applicable to contract actions exceeding \$500,000 and when subcontracting possibilities exist. The clause is small business exempt) (In paragraph (b), insert the appropriate number between 0 and 10 – "XX") (Complete the space in the parentheses)
x	FAR 52.222-20	Walsh Healy Public Contracts Act (DEC 1996) (Applicable if the contract includes deliverable materials, supplies, articles or equipment in an amount that exceeds or may exceed \$10,000)
x	FAR 52.223-5	Pollution Prevention and Right-to-Know Information (AUG 2003) (Applicable if contract provides for performance, in whole or in part, on a Federal facility)
x	FAR 52.223-6	Drug-Free Workplace (MAY 2001) (Applies when contract action exceeds \$100,000 or at any value when the contract is awarded to an individual)
	FAR 52.227-10	Filing of Patent Applications -- Classified Subject Matter (APR 1984)
x	FAR 52.227-11	Patent Rights -- Retention by the Contractor (Short Form) (Jun 1997)(Applicable if contractor is a small business or a non profit organization.
	FAR 52.230-2	Cost Accounting Standards (APR 1998) (Applicable when contract amount is over \$500,000, if contractor is subject to full CAS coverage, as set forth in 48 CFR Chapter 99, Subpart 9903.201-2(a) (FAR Appendix B)
	FAR 52.230-3	Disclosure and Consistency of Cost Accounting Practices (APR 1998) (Applicable when contract amount is over \$500,000 but less than \$25 million, and the offeror certifies it is eligible for and elects to use modified CAS coverage as set forth in 48 CFR Chapter 99, Subpart 9903.201-2 (FAR Appendix B)
	FAR 52.230-6	Administration of Cost Accounting Standards (APR 2005) (Applicable if contract is subject to either clause at FAR 52.230-2 or the clause at FAR 52.230-3 and FAR 52.230-5)
x	FAR 52.232-20	Limitation of Cost (APR 1984) (Applicable only when contract action is fully funded)
x	FAR 52.232-22	Limitation of Funds (APR 1984) (Applicable only when contract action is incrementally funded)
	FAR 52.239-1	Privacy or Security Safeguards (AUG 1996) (Applicable to contracts for information technology which require security of information technology, and/or are for the design, development, or operation of a system of records using commercial information technology services or support services.)

	FAR 52.245-18	Special Test Equipment (FEB 1993) Applicable when it is anticipated that the contractor will acquire or fabricate special test equipment but the exact identification of the equipment is not known)
x	FAR 52.246-08	Inspection of Research and Development – Cost Reimbursement (MAY 2001) (Use instead of FAR 52.246-09 (Inspection of Research and Development – Short Form) (APR 84) when the primary objective of the contract is the delivery of end items other than designs, drawings and reports.)
	DFARS 252.203-7002	Display of DoD Hotline Poster (DEC 1991) (Applicable only when contract action exceeds \$5 million or when any modification increases contract amount to more than \$5 million)
	DFARS 252.204-7000	Disclosure of Information (DEC 1991) (Applies when Contractor will have access to or generate unclassified information that may be sensitive and inappropriate for release to the public)
	DFARS 252.204-7005	Oral Attestation of Security Responsibilities (NOV 2001) (Applicable if FAR 52.204-2, Security Requirements Applies)
	DFARS 252.205-7000	Provision of Information to Cooperative Agreement Holders (DEC 1991) (Applicable only when contract action exceeds \$1,000,000 or when any modification increases total contract amount to more than \$1,000,000)
x	DFARS 252.211-7003	Item Identification and Valuation (JUN 2005) (Applicable if the contract includes deliverable items (1) with a unit cost of \$5000 or more or (2) that will be serially managed or controlled inventory.)
x	DFARS 252.215-7002	Cost Estimating System requirements (OCT 1998) (Applicable only to contract actions awarded on the basis of certified cost or pricing data)
	DFARS 252.223-7004	Drug-Free Work Force (SEP 1988) (Applicable (a) if contract involves access to classified information; or (b) when the Contracting Officer determines that the clause is necessary for reasons of national security or for the purpose of protecting the health or safety of performance of the contract.
x	DFARS 252.223-7006	Prohibition on Storage and Disposal of Toxic and Hazardous Materials (APR 1993) (Applicable if work requires, may require, or permits contractor performance on a DoD installation)
x	DFARS 252.223-7002	Safety Precautions for Ammunition and Explosives (MAY 1994) (Applicable if contract involves ammunition and explosive testing at a Contractor's facility)
x	DFARS 252.223-7003	Change in Place of Performance--Ammunition and Explosives (DEC 1991) (Applicable if contract involves ammunition and explosive testing at a Contractor's facility)
	DFARS 252.225-7001	Buy American Act and Balance of Payments Program (JUN 2005) (Applicable if the contract includes deliverable supplies) (This clause does not apply if an exception to the Buy American Act or Balance of Payments Program is known or if using the clause at 252.225-7007, 252.225-7021, or 252.225-7036.)

	DFARS 252.225-7002	Qualifying Country Sources as Subcontractors (APR 2003) (Applicable when clause at DFARS 252.225-7001, 252.227-7007, 252.227-7021, or 252.227-7036 applies)
	DFARS 252.225-7016	Restriction On Acquisition Of Ball And Roller Bearings (JUN 2005) (Applicable if contract includes deliverable supplies, unless Contracting Officer knows that items being acquired do not contain ball or roller bearings)
	DFARS 252.226-7001	Utilization of Indian Organizations and Indian-Owned Economic Enterprises, and Native Hawaiian Small Business Concerns (SEP 2004) (Section 8021 of Pub. L. 107-248 [and similar sections in subsequent DoD appropriation acts.])
x	DFARS 252.227-7018	Rights in Noncommercial Technical Data and Computer Software – Small Business Innovation Research (SBIR) Program (JUN 195) (Also applies to STTR programs)
	DFARS 252.227-7025	Limitations On The Use Or Disclosure Of Government-Furnished Information Marked With Restrictive Legends (JUN 1995) (Applicable when the Government will provide the contractor, for the performance of its contract, technical data, including software marked with another contractor's restrictive legend(s))
x	DFARS 252.227-7034	Patents--Subcontracts (APR 1984) [Applicable to contracts containing FAR 52.227-11, Patent Rights--Retention by the Contractor (Short Form)]
x	DFARS 252.227-7039	Patents--Reporting Of Subject Inventions (APR 1990) [Applicable to contracts containing FAR 52.227-11, Patent Rights--Retention by the Contractor (Short Form)]
	DFARS 252.242-7004	Material Management and Accounting System (DEC 2000) (Applicable to contract actions exceeding \$100,000) (Not applicable to contracts set aside for exclusive participation by small business and small disadvantaged business concerns)

SECTION J – LIST OF ATTACHMENTS

1. EXHIBIT A, entitled "Contract Data Requirements List" (DD Form 1423) –3 page(s) with Enclosure Number 1, entitled "Contract Data Requirements List - Instructions for Distribution."
2. Attachment Number 1, entitled, "Statement of Work."
3. Attachment Number 2, entitled, "Report Documentation Page" (SF 298) 1 page.
4. Attachment Number 3, entitled, "Financial Accounting Data Sheet."

SECTION K - REPRESENTATIONS, CERTIFICATIONS AND OTHER STATEMENTS OF OFFERORS

1. The Contractor's ORCA validation dated from: 9/12/05 to: 9/12/06 is hereby incorporated into this contract by reference. The DFARS and Contract Specific Representations and Certifications, dated 9/8/05 are hereby incorporated by reference.

AMENDMENT OF SOLICITATION/MODIFICATION OF CONTRACT

CONTRACT ID CODE
D0-C9(U)PAGE OF PAGES
1 2

2. AMENDMENT/MODIFICATION NO. P00004	3. EFFECTIVE DATE SEE BLOCK 16C N00014	4. REQUISITION/PURCHASE REG. NO. 10PR07878-00 / 1014901	5. PROJECT NO. (if applicable) N.A.
6. ISSUED BY CODE		7. ADMINISTERED BY (if other than item 6) SCD-C	CODE S2404A

OFFICE OF NAVAL RESEARCH
ONR 254 Patrick Sisk (703)696-6804
E-mail Patrick.Sisk@navy.mil
One Liberty Center
875 North Randolph St. Suite 1425
Arlington, VA 22203-1995

DCM VIRGINIA
10500 BATTLEVIEW PARKWAY SUITE 200
MANASSAS, VA 20109-2342

8. NAME AND ADDRESS OF CONTRACTOR (No., street, county, State and ZIP Code)

METAL STORM INC
4350 FAIRFAX DR
ARLINGTON, VA 22203-1625

(✓)	9A. AMENDMENT OF SOLICITATION NO. N.A.
<input type="checkbox"/>	9B. DATED (SEE ITEM 11)
<input checked="" type="checkbox"/>	10A. MODIFICATION OF CONTRACT/ORDER NO. N00014-06-C-0068
	10B. DATED (SEE ITEM 13) 30 NOV 2005

CODE 3W1H3	FACILITY CODE
---------------	---------------

11. THIS ITEM ONLY APPLIES TO AMENDMENTS OF SOLICITATIONS

☐ The above numbered solicitation is amended as set forth in item 14. The hour and date specified for receipt of Offers ☐ is extended ☐ is not extended.

Offers must acknowledge receipt of this amendment prior to the hour and date specified in the solicitation or as amended, by one of the following methods: (a) By completing items 8 and 15, and returning copies of the amendment; (b) By acknowledging receipt of the amendment on each copy of the offer submitted; or (c) By separate letter or telegram which includes a reference to the solicitation and amendment numbers. FAILURE OF YOUR ACKNOWLEDGMENT TO BE RECEIVED AT THE PLACE DESIGNATED FOR THE RECEIPT OF OFFERS PRIOR TO THE HOUR AND DATE SPECIFIED MAY RESULT IN REJECTION OF YOUR OFFER. If by virtue of this amendment you desire to change an offer already submitted, such change may be made by telegram or letter, provided each telegram or letter makes reference to the solicitation and this amendment, and is received prior to the opening hour and date specified.

12. ACCOUNTING AND APPROPRIATION DATA (if required)

SEE ATTACHED FINANCIAL ACCOUNTING DATA SHEETS

13. THIS ITEM APPLIES ONLY TO MODIFICATIONS OF CONTRACTS/ORDERS
IT MODIFIES THE CONTRACT/ORDER NO. AS DESCRIBED ITEM 14.

(✓)	A. THIS CHANGE ORDER IS ISSUED PURSUANT TO (Specify Authority) THE CHANGES SET FORTH IN ITEM 14 ARE MADE IN THE CONTRACT ORDER NO. IN ITEM 10A.
<input type="checkbox"/>	B. THE ABOVE NUMBERED CONTRACT/ORDER IS MODIFIED TO REFLECT THE ADMINISTRATIVE CHANGES (such as changes in paying office, appropriation data, etc.) SET FORTH IN ITEM 14, PURSUANT TO THE AUTHORITY OF FAR 43.103(b).
<input type="checkbox"/>	C. SUPPLEMENTAL AGREEMENT IS ENTERED INTO PURSUANT TO AUTHORITY OF: AUTHORITY FOR OTHER THAN FULL AND OPEN COMPETITION:
<input checked="" type="checkbox"/>	D. OTHER (Specify type of modification and authority) Unilateral Modification IAW 43.103 (b) and Mutual Agreement of the Parties

E. IMPORTANT: Contractor ☒ is not, ☐ is required to sign this document and return copies to the issuing office.

14. DESCRIPTION OF AMENDMENT/MODIFICATION (Organized by UCF section headings, including solicitation/contract subject matter where feasible.)

THE PURPOSE OF THIS MODIFICATION IS TO DEOBLIGATE FUNDING UNDER AWARD NUMBER N00014-06-C-0068.

Except as provided herein, all terms and conditions of the document referenced in item 9A or 10A, as heretofore changed, remains unchanged and in full force and effect.

15A. NAME AND TITLE OF SIGNER (Type or print)	16A. NAME AND TITLE OF CONTRACTING OFFICER (Type or print) R. Brian Bradley Contracting Officer
15B. CONTRACTOR/OFFEROR	16B. UNITED STATES OF AMERICA (b) (6)
15C. DATE SIGNED	16C. DATE SIGNED MAY 17 2010
(Signature of person authorized to sign) SN 7540-01-152-8070 PREVIOUS EDITION UNUSABLE NAVOCNR OVERPRINT (3-88)	BY (Signature of Contracting Officer)

30-105

STANDARD FORM 30 (REV. 10-83)
Prescribed by GSA
FAR (48 CFR) 53.243

Contract Number: N00014-06-C-0068/P00004

Effective as of the date of this Modification:

1. The funds available for performance of this contract are decreased by the amount set forth on the attached Financial Accounting Data Sheets.
2. Funds are deobligated as follows:

\$9.16 is deobligated under SLIN 000101 (ACRN AA). \$695,990.84 remains obligated under this SLIN.

Accordingly, Section B, SCHEDULE OF SUPPLIES AND SERVICES, is replaced with the following:

SCHEDULE OF SUPPLIES AND SERVICES

Item No.	Supplies/Services	Estimated Cost	Fixed Fee	Estimated CPFF
0001	The Contractor shall furnish the necessary personnel and facilities to conduct the research effort as described in Section C and provide reports and data in accordance with Exhibit A. 000101 ACRN AA \$695,990.84 000102 ACRN AB \$292,679 Total: \$988,669.84	\$915,444	\$73,235	\$988,679
0002	Weapon pod on Government owned platform (Weapon system from Demonstration of Live Fire Test of Objective 2) in accordance with SOW 3.4.	NSP	NSP	NSP
TOTAL ESTIMATED CONTRACT CONSIDERATION:		\$915,444	\$73,235	\$988,679

All other terms and conditions remain unchanged.

FINANCIAL ACCOUNTING DATA SHEET - NAVY

[illegible]

AMENDMENT OF SOLICITATION/MODIFICATION OF CONTRACT

CONTRACT ID CODE
D0-C9(U)PAGE OF PAGES
1 2

2. AMENDMENT/MODIFICATION NO. P00003	3. EFFECTIVE DATE SEE BLOCK 16C	4. REQUISITION/PURCHASE REG. NO. 08PR04867-00	5. PROJECT NO. (if applicable) N.A.
6. ISSUED BY CODE	N00014	7. ADMINISTERED BY (if other than item 6) SCD-C	CODE S2404A

OFFICE OF NAVAL RESEARCH
ONR 253 HALYNA MUDRI (703)696-0469
E-mail Halyna.Mudri@navy.mil
One Liberty Center
875 North Randolph St.
Arlington VA 22203-1995

DCM VIRGINIA
10500 BATTLEVIEW PARKWAY SUITE 200
MANASSAS VA 20109-2342

8. NAME AND ADDRESS OF CONTRACTOR (No., street, county, State and ZIP Code)

METAL STORM INC
4350 FAIRFAX DR STE 810
ARLINGTON VA 22203-1625

(✓) 9A. AMENDMENT OF SOLICITATION NO.
N.A.☐ 9B. DATED (SEE ITEM 11)☒ 10A. MODIFICATION OF CONTRACT/ORDER NO.

N00014-06-C-0068

10B. DATED (SEE ITEM 13)

30 NOV 2005

CODE 3W1H3	FACILITY CODE
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11. THIS ITEM ONLY APPLIES TO AMENDMENTS OF SOLICITATIONS

☐ The above numbered solicitation is amended as set forth in item 14. The hour and date specified for receipt of Offers ☐ is extended ☐ is not extended.

Offers must acknowledge receipt of this amendment prior to the hour and data specified in the solicitation or as amended, by one of the following methods: (a) By completing items 8 and 15, and returning copies of the amendment; (b) By acknowledging receipt of the amendment on each copy of the offer submitted; or (c) By separate letter or telegram which includes a reference to the solicitation and amendment numbers. FAILURE OF YOUR ACKNOWLEDGMENT TO BE RECEIVED AT THE PLACE DESIGNATED FOR THE RECEIPT OF OFFERS PRIOR TO THE HOUR AND DATE SPECIFIED MAY RESULT IN REJECTION OF YOUR OFFER. If by virtue of this amendment you desire to change an offer already submitted, such change may be made by telegram or letter, provided each telegram or letter makes reference to the solicitation and this amendment, and is received prior to the opening hour and data specified.

12. ACCOUNTING AND APPROPRIATION DATA (if required)

N/A

13. THIS ITEM APPLIES ONLY TO MODIFICATIONS OF CONTRACTS/ORDERS
IT MODIFIES THE CONTRACT/ORDER NO. AS DESCRIBED ITEM 14.

(✓) A. THIS CHANGE ORDER IS ISSUED PURSUANT TO (Specify Authority) THE CHANGES SET FORTH IN ITEM 14 ARE MADE IN THE CONTRACT ORDER NO. IN ITEM 10A.

☐ B. THE ABOVE NUMBERED CONTRACT/ORDER IS MODIFIED TO REFLECT THE ADMINISTRATIVE CHANGES (such as changes in paying office, appropriation data, etc.) SET FORTH IN ITEM 14, PURSUANT TO THE AUTHORITY OF FAR 43.103(b).☐ C. SUPPLEMENTAL AGREEMENT IS ENTERED INTO PURSUANT TO AUTHORITY OF:
AUTHORITY FOR OTHER THAN FULL AND OPEN COMPETITION:☒ D. OTHER (Specify type of modification and authority)

Unilateral Modification IAW FAR 43.103 (b), and IAW contractor's email dated 8 Jan 08

E. IMPORTANT: Contractor ☒ is not, ☐ is required to sign this document and return copies to the issuing office.

14. DESCRIPTION OF AMENDMENT/MODIFICATION (Organized by UCF section headings, including solicitation/contract subject matter where feasible.)

The purpose of this modification is to extend the Period of Performance at no additional cost to the Government under Contract Number N00014-06-C-0068.

Except as provided herein, all terms and conditions of the document referenced in item 9A or 10A, as heretofore changed, remains unchanged and in full force and effect.

15A. NAME AND TITLE OF SIGNER (Type or print)

16A. NAME AND TITLE OF CONTRACTING OFFICER (Type or print)

Halyna Mudri Contracting Officer

15B. CONTRACTOR/OFFEROR

15C. DATE SIGNED

16B. UNITED STATES OF AMERICA

16C. DATE SIGNED

(Signature of person authorized to sign)

BY (b) (6)

(Signature of Contracting Officer)

11/11/2008

SN 7540-01-152-8070

30-105

STANDARD FORM 30 (REV. 10-83)

Prescribed by GSA

FAR (48 CFR) 53.243

PREVIOUS EDITION UNUSABLE
NAVOCNR OVERPRINT (3-88)

Effective as of the date of this modification:

1. Section F titled "Deliveries or Performance" is revised to read as follows (changes in **bold**):

"SECTION F - DELIVERIES OR PERFORMANCE

1. The research effort performed under CLIN 0001 shall be conducted from 30 Nov 2005 through **31 Mar 2008**.
2. Distribution, consignment and marking instructions for all contract line items shall be in accordance with Enclosure Number 1 of Exhibit A. The address for the cognizant Program Officer is as follows:

Program Officer
Office of Naval Research
875 North Randolph St.
Arlington, Virginia 22203-1995

Attn: Clifford Bedford Code: 351
Ref: Contract N00014-06-C-0068"

2. As a result of this modification, the contract's total value remains unchanged.

ALL OTHER TERMS AND CONDITIONS OF THE CONTRACT REMAIN UNCHANGED.

AMENDMENT OF SOLICITATION/MODIFICATION OF CONTRACT				CONTRACT ID CODE D0-C9(U)		PAGE OF PAGES 1 2	
2. AMENDMENT/MODIFICATION NO. P00002		3. EFFECTIVE DATE SEE BLOCK 16C		4. REQUISITION/PURCHASE REG. NO. 07PR08418-00		5. PROJECT NO. (if applicable) N.A.	
6. ISSUED BY CODE		N00014		7. ADMINISTERED BY (if other than item 6) SCD-C		CODE S2404A	
OFFICE OF NAVAL RESEARCH ONR 253 David Hershey (CACI) (703)696-6745 E-mail david.hershey.ctr.navy.mil One Liberty Center 875 North Randolph St. Suite 1425 Arlington VA 22203-1995				DCM VIRGINIA 10500 BATTLEVIEW PARKWAY SUITE 200 MANASSAS VA 20109-2342			
8. NAME AND ADDRESS OF CONTRACTOR (No., street, county, State and ZIP Code) METAL STORM INC 4350 FAIRFAX DR STE 810 ARLINGTON VA 22203-1625				<input checked="" type="checkbox"/> 9.A. AMENDMENT OF SOLICITATION NO. N.A. <input type="checkbox"/> 9B. DATED (SEE ITEM 11) <input checked="" type="checkbox"/> 10A. MODIFICATION OF CONTRACT/ORDER NO. N00014-06-C-0068 10B. DATED (SEE ITEM 13) 30 NOV 2005			
CODE 3W1H3		FACILITY CODE					

11. THIS ITEM ONLY APPLIES TO AMENDMENTS OF SOLICITATIONS

☐ The above numbered solicitation is amended as set forth in item 14. The hour and date specified for receipt of Offers ☐ is extended ☐ is not extended.

Offers must acknowledge receipt of this amendment prior to the hour and data specified in the solicitation or as amended, by one of the following methods: (a) By completing items 8 and 15, and returning copies of the amendment; (b) By acknowledging receipt of the amendment on each copy of the offer submitted; or (c) By separate letter or telegram which includes a reference to the solicitation and amendment numbers. FAILURE OF YOUR ACKNOWLEDGMENT TO BE RECEIVED AT THE PLACE DESIGNATED FOR THE RECEIPT OF OFFERS PRIOR TO THE HOUR AND DATE SPECIFIED MAY RESULT IN REJECTION OF YOUR OFFER. If by virtue of this amendment you desire to change an offer already submitted, such change may be made by telegram or letter, provided each telegram or letter makes reference to the solicitation and this amendment, and is received prior to the opening hour and data specified.

12. ACCOUNTING AND APPROPRIATION DATA (if required)

N/A

**13. THIS ITEM APPLIES ONLY TO MODIFICATIONS OF CONTRACTS/ORDERS
IT MODIFIES THE CONTRACT/ORDER NO. AS DESCRIBED ITEM 14.**

<input checked="" type="checkbox"/>	A. THIS CHANGE ORDER IS ISSUED PURSUANT TO (Specify Authority) THE CHANGES SET FORTH IN ITEM 14 ARE MADE IN THE CONTRACT ORDER NO. IN ITEM 10A.
<input type="checkbox"/>	B. THE ABOVE NUMBERED CONTRACT/ORDER IS MODIFIED TO REFLECT THE ADMINISTRATIVE CHANGES (such as changes in paying office, appropriation data, etc.) SET FORTH IN ITEM 14, PURSUANT TO THE AUTHORITY OF FAR 43.103(b).
<input type="checkbox"/>	C. SUPPLEMENTAL AGREEMENT IS ENTERED INTO PURSUANT TO AUTHORITY OF: AUTHORITY FOR OTHER THAN FULL AND OPEN COMPETITION:
<input checked="" type="checkbox"/>	D. OTHER (Specify type of modification and authority) Unilateral Modification IAW FAR 43.103 (b), and IAW contractor's email dated 16 April 2007
E. IMPORTANT: Contractor <input checked="" type="checkbox"/> is not, <input type="checkbox"/> is required to sign this document and return copies to the issuing office.	

14. DESCRIPTION OF AMENDMENT/MODIFICATION (Organized by UCF section headings, including solicitation/contract subject matter where feasible.)

The purpose of this modification is to extend the Period of Performance under Contract Number N00014-06-C-0068. Except as provided herein, all terms and conditions of the document referenced in item 9A or 10A, as heretofore changed, remains unchanged and in full force and effect.

15A. NAME AND TITLE OF SIGNER (Type or print)		16A. NAME AND TITLE OF CONTRACTING OFFICER (Type or print) Susan M. Sutherland, Contracting Officer	
15B. CONTRACTOR/OFFEROR	15C. DATE SIGNED	16B. UNITED STATES OF AMERICA (b) (6) BY [REDACTED] (Signature of Contracting Officer)	16C. DATE SIGNED 7/10/07
(Signature of person authorized to sign)			

SN 7540-01-152-8070
PREVIOUS EDITION UNUSABLE
NAVOCNR OVERPRINT (3-88)

30-105

STANDARD FORM 30 (REV. 10-83)
Prescribed by GSA
FAR (48 CFR) 53.243

Effective as of the date of this modification:

1. Section F- Deliveries of Performance, paragraph 1, is revised as follows:

- 1. The research effort performed under CLIN 0001 shall be conducted from 30 November 2005, through 31 January 2008.**

This modification has no effect on the total cost of the contract.

All other terms and conditions remain unchanged.

AMENDMENT OF SOLICITATION/MODIFICATION OF CONTRACT			CONTRACT ID CODE D0-C9(U)	PAGE OF 1	PAGES 2
2. AMENDMENT/MODIFICATION NO. P00001	3. EFFECTIVE DATE SEE BLOCK 16C	4. REQUISITION/PURCHASE REG. NO. 06PR04688-00	5. PROJECT NO. (if applicable) N.A.		
6. ISSUED BY CODE	N00014	7. ADMINISTERED BY (if other than item 6) SCD-C	CODE S2404A		
OFFICE OF NAVAL RESEARCH ONR 253 HALYNA MUDRI (703)696-0469 E-mail MUDRIH@onr.navy.mil One Liberty Center 875 North Randolph St. Suite 1425 Arlington VA 22203-1995		DCM VIRGINIA 10500 BATTLEVIEW PARKWAY SUITE 200 MANASSAS VA 20109-2342			
8. NAME AND ADDRESS OF CONTRACTOR (No., street, county, State and ZIP Code) METAL STORM INC 4350 FAIRFAX DR STE 810 ARLINGTON VA 22203-1625			(3)	9.A. AMENDMENT OF SOLICITATION NO. N.A.	
			<input type="checkbox"/>	9B. DATED (SEE ITEM 11)	
			<input checked="" type="checkbox"/>	10A. MODIFICATION OF CONTRACT/ORDER NO. N00014-06-C-0068	
				10B. DATED (SEE ITEM 13) 30 NOV 2005	
CODE 3W1H3	FACILITY CODE				
11. THIS ITEM ONLY APPLIES TO AMENDMENTS OF SOLICITATIONS					

☐ The above numbered solicitation is amended as set forth in item 14. The hour and date specified for receipt of Offers ☐ is extended ☐ is not extended.

Offers must acknowledge receipt of this amendment prior to the hour and data specified in the solicitation or as amended, by on of the following methods: (a) By completing items 8 and 15, and returning copies of the amendment; (b) By acknowledging receipt of the amendment on each copy of the offer submitted; or (c) By separate letter or telegram which includes a reference to the solicitation and amendment numbers. FAILURE OF YOUR ACKNOWLEDGMENT TO BE RECEIVED AT THE PLACE DESIGNATED FOR THE RECEIPT OF OFFERS PRIOR TO THE HOUR AND DATE SPECIFIED MAY RESULT IN REJECTION OF YOUR OFFER. If by virtue of this amendment you desire to change an offer already submitted, such change may be made by telegram or letter, provided each telegram or letter makes reference to the solicitation and this amendment, and is received prior to the opening hour and data specified.

12. ACCOUNTING AND APPROPRIATION DATA (if required)

See attached financial accounting data sheet.

13. THIS ITEM APPLIES ONLY TO MODIFICATIONS OF CONTRACTS/ORDERS
IT MODIFIES THE CONTRACT/ORDER NO. AS DESCRIBED ITEM 14.

(3)	A. THIS CHANGE ORDER IS ISSUED PURSUANT TO (Specify Authority) THE CHANGES SET FORTH IN ITEM 14 ARE MADE IN THE CONTRACT ORDER NO. IN ITEM 10A.
<input type="checkbox"/>	
<input type="checkbox"/>	B. THE ABOVE NUMBERED CONTRACT/ORDER IS MODIFIED TO REFLECT THE ADMINISTRATIVE CHANGES (such as changes in paying office, appropriation data, etc.) SET FORTH IN ITEM 14, PURSUANT TO THE AUTHORITY OF FAR 43.103(b).
<input type="checkbox"/>	C. SUPPLEMENTAL AGREEMENT IS ENTERED INTO PURSUANT TO AUTHORITY OF: AUTHORITY FOR OTHER THAN FULL AND OPEN COMPETITION:
<input checked="" type="checkbox"/>	D. OTHER (Specify type of modification and authority) LIMITATION OF FUNDS CLAUSE

E. IMPORTANT: Contractor ☒ is not, ☐ is required to sign this document and return 2 copies to the issuing office.

14. DESCRIPTION OF AMENDMENT/MODIFICATION (Organized by UCF section headings, including solicitation/contract subject matter where feasible.)

The purpose of this modification is to increase funding under Contract Number N00014-06-C-0068.

Except as provided herein, all terms and conditions of the document referenced in item 9A or 10A, as heretofore changed, remains unchanged and in full force and effect.

15A. NAME AND TITLE OF SIGNER (Type or print)		16A. NAME AND TITLE OF CONTRACTING OFFICER (Type or print) Susan M. Sutherland, Contracting Officer	
15B. CONTRACTOR/OFFEROR (Signature of person authorized to sign) SN 7540-01-152-8070 PREVIOUS EDITION UNUSABLE NAVOCNR OVERPRINT (3-88)	15C. DATE SIGNED	16B. UNITED STATES OF AMERICA (b) (6) BY (Signature of Contracting Officer) 30-105	16C. DATE SIGNED 12/16/05

STANDARD FORM 30 (REV. 10-83)
Prescribed by GSA
FAR (48 CFR) 53.243

Effective as of the date of this modification:

1. The funds available for the performance of this modification are increased by the amount set forth in the attached Financial Accounting Data (FAD) sheet.

2. Section B- Supplies or Services and Price/Costs are revised to read as follows:

ITEM NO.	SUPPLIES/SERVICES	ESTIMATED COST	FIXED FEE	TOTAL ESTIMATED COST & FIXED FEE
0001	The Contractor shall furnish the necessary personnel and facilities to conduct the research effort as described in Section C and provide reports and data in accordance with Exhibit A. 01 ACRN AA \$696,000 02 ACRN AB \$292,679	\$915,444	\$73,235	\$988,679
0002	Weapon pod on Government owned platform (Weapon system from Demonstration of Live Fire Test of Objective 2) in accordance with SOW 3.4	NSP	NSP	NSP
TOTAL ESTIMATED CONTRACT CONSIDERATION:		\$915,444	\$73,235	\$988,679

3. Section G – Contract Administration paragraph 1.3 Allotment of Funds is revised to read as follows:

1.3 Allotment of Funds

RESERVED

FINANCIAL ACCOUNTING DATA SHEET - NAVY

1. CONTRACT NUMBER (CRITICAL) N0001406C0068		2. SPIIN (CRITICAL)		3. MOD (CRITICAL) P00001		4. PR NUMBER 06PR04688-00		PAGE 1 OF 1					
6. LINE OF ACCOUNTING													
CLIN/SLIN	A. ACNRN (CRITICAL)	B. APPROPRIATION (CRITICAL)	C. SUBHEAD (CRITICAL)	D. OBJ CLA	E. PARM	F. RFM	G. SA	H. AAA (CRITICAL)	I. IT	J. PAA	K. COST CODE PROJ UNIT MCC PDLI & SUF	7. AMOUNT (CRITICAL)	NAVY INTERNAL USE ONLY REF DOC/ACRN
	AB	1751319	W6ED	255	RA	369	0	068342	2D	000000	01864 000 SBFO	\$292,679.00	PR#06PR04688-00 FRC:6SBE
PAGE TOTAL												\$292,679.00	
GRAND TOTAL												\$292,679.00	
COMPTROLLER APPROVAL: FOR FISCAL DATA AND SIGNATURE BY: [REDACTED] DATE: [REDACTED]												for COMPTROLLER ONR CONTRACT REVIEWED	

20 Dec 05

ACTIVE PROTECTION SYSTEM

Statement of Work

1. Name of Project

Active Protection System providing lethal and/or non-lethal unattended remotely operated weapon systems within a networked environment to protect very high value assets.

2. Project Description

The goal of this project is to develop, produce and evaluate an anti-personnel unattended weapon pod and controller utilizing electronic ballistic technology (EBT), proprietary to Metal Storm, Inc. The technology enables multiple projectiles to be stacked and fired from a single tube (barrel). The barrels can be grouped together in a range of sizes/calibers to form compact electronically operated weapons. The projectiles are stored and transported in and eventually electronically fired from, these multi-barreled weapons. Unlike conventional weapons, EBT weapons have no moving parts; thus maintenance is greatly reduced. They can remain in place for long periods until activated, at which time they can fire at variable rates of from one, to over a million, rounds per minute. In certain applications, EBT weapons can lead to reduced manpower requirements and attendant cost savings.

An innovative weapon mount/aiming platform will be developed allowing the weapon deployment inside a fixed structure or in an outdoor environment onboard an Unmanned Ground Vehicle (UGV). The weapon system will be installed on available UGV's to determine feasibility of CONOPS.

The weapon pod and controller will be integrated into an existing command & control system developed under the Network-integrated Remotely Operated Weapon System (NROWS) project, sponsored by the Defense Threat Reduction Agency (DTRA). The weapon pod and controller will be evaluated to determine effectiveness, capture performance data and ability to integrate into unmanned vehicle systems.

The EBTW project will enable a leap-ahead capability to delay/denial applications by providing a real-time, lethal and/or non-lethal unattended remotely operated weapon system within a networked environment to protect very high value assets such as military bases, nuclear facilities, hydro-electric plants, etc.

There are two primary objectives for this contract.

Objective 1: Initial Demonstration of Metal Storm Stacked Round 40mm Weapon System Capability on an MDARS Unmanned Ground Vehicle (UGV)

This objective is to demonstrate the capability of a 40mm Metal Storm weapons system mounted on a UGV (General Dynamics MDARS-E available for this demo from SPAWAR). The weapon system will be placed on a remotely operated mount with azimuth and elevation controls for aiming. This initial demonstration will show the Metal Storm weapon system firing from the UGV – which will be static at the time of firing. The weapon system will engage stationary targets at multiple locations and will be the first step in the determination of a platform/weapon interface for the development of the SBIR objectives. This demonstration and the lessons learned about the individual components of the system and the interfaces between those components will provide the backbone for the development of the Active Protection System to be utilized on the mobile platform during the Objective 2 demonstration.

Objective 2: Final Demonstration of Metal Storm Stacked Round Weapon System on MDARS Unmanned Ground Vehicle.

This objective is to demonstrate the capability of the MDARS UGV armed with a Metal Storm weapon system on a mount with azimuth and elevation controls to aim the weapon system. The system will be fully integrated with a computer based targeting, ranging, and fire control system. This will allow the user to track targets and to calculate an appropriate firing solution. It will be shown that the Metal Storm weapon system mounted on the MDARS UGV can provide a previously unreachable level of protection to fixed and mobile assets, as well as friendly civilians and soldiers. The Active Protection System to be developed by Metal Storm will be

capable of defeating a number of threats such as vehicles, combatants, and insurgency devices such as IED's. In addition to directly engaging the enemy, the Active Protection System will be capable of providing deterrents and obscurants to provide a barrier against an enemy attack.

3. Tasks

3.1 Task 1 – Develop CONOPS for Deployment against Threat(s)

Conduct Kickoff Meeting: To start the SBIR Phase II, a kickoff meeting will be held to identify the system requirements, and define the demonstration objectives, locations, and dates.

Define CONOPS: As the research is ongoing to determine the path to follow, a Concept of Operations (CONOPS) will be developed. The preliminary CONOPS will be used to define the demonstration goals of Objective 1. A final CONOPS will be used to define the demonstration goals of Objective 2.

3.1.1 Develop, with SPAWAR staff and Metal Storm provided Subject Matter Experts (SMEs), data needs (i.e. questionnaire) from end users for development of the CONOPS.

Identify Requirements Via Customer/User Input: Metal Storm will conduct research to determine the path to follow in order to fulfill the user needs, and requirements as defined during a kickoff meeting. Some of the research may begin at the kickoff meeting through dialog with the user or customer.

Assess/Survey Current Capabilities, Alternatives & Inefficiencies: Based on the user inputs gleaned from the CONOPS discussions, Metal Storm will review current capabilities with regard to the user requirements and seek alternatives where necessary and determine inefficiencies if uncovered.

Telephone and in-person onsite interviews with end users (including both end users likely to deploy the EBTW inside a fixed structure and those likely to deploy the EBTW in an outdoor environment onboard a UGV) – including both end users identified by Metal Storm and those identified by SPAWAR will be conducted.

Develop and submit draft CONOPS for review. **DELIVERABLE**

Develop System Concept/Architecture: Following the drafting of the CONOPS, the system architecture will be developed to guide the final design and integration of the weapon system, mount, control system, and UGV (MDARS or alternative to be supplied).

Determine Roadmap for Software Development: Concurrent with the development of the system architecture, a roadmap for software development required for Objective 2, to fully integrate the three subsystems, will be created.

The final configurations and CONOPS desired for the final product to be demonstrated at the Objective 2 demonstration, including numbers of barrels, caliber of projectiles, warhead options (Kinetic, HE, FRAG, LTL, etc.) will also be determined.

3.1.2 Incorporate comments and present final CONOPS **DELIVERABLE & MILESTONE**

3.2 Task 2 – MS Weapon Design/Build for Objective 1 Demonstration

Gather Information Necessary for Objective 1 Demonstration: Concurrent to the identification of requirements noted above, Metal Storm will gather all the pertinent information to plan for the Objective 1 Demonstration. This includes site specific information about where the demonstration will be held, information of the platform on which the demonstration will be conducted, and more.

Acquisition and Assembly of Subsystems: Following the preliminary CONOPS draft, acquisition and assembly of subsystems to be used in the Objective 1 demonstration will commence.

Demonstration System Assembly: Upon completion of the assembly of the subsystems to be used in the Objective 1 demonstration, a testing of individual components will be accomplished while assembling the individual components into a demonstration system.

Demonstration System Testing and Dry Run: Upon completion of the demonstration system assembly a non-firing run through of its operations (dry run) will be done. Data collected will be used to refine the final CONOPS and system architecture.

Live Fire Demonstration: Objective 1 demonstration will follow the testing and dry run. **MILESTONE**

Documentation of Lessons Learned and User Feedback From Tests and Demonstration: Immediately following the Objective 1 demonstration, the lessons learned through testing will be documented. At the same time the user and customer feedback from the demonstration will be documented. These two documents will be tied together and delivered to the customer as a combined lessons learned and user feedback documentation.

DELIVERABLE

3.3 Task 3 – Integrate/Interface MS Weapon with Other Components for Objective 2 Demonstration.

Select Munitions and Determine Defeat Method: After completion of the Objective #1 Demo, Metal Storm will select munitions and establish a defeat method to use those munitions against various threats from insurgents. Some of the Munitions to be looked at will be HE, HEMP, SLAP, and FRAP rounds.

Select/Design Sensing and Targeting System: Concurrent with the selection of munitions and establishment of defeat method, Metal Storm will select a sensing and targeting system. All manner of systems will be evaluated, with an emphasis on reliability, speed, and accuracy.

Determine Configuration for Launch Package: Following establishment of the defeat method as well as the targeting and sensing systems, a launch package will be designed to deliver the selected munitions as defined by the defeat method. This will likely take the form of a multi-barrel 40mm weapon system, having at least 4 barrels - or other design as determined by end user input during the CONOPS development phase from Task 1.

Select/Design Fire Control System: After the launch package has been designed, a fire control system will be designed or selected to meet the needs of the launch package.

Design Platform Interface: Concurrent to the design or selection of a fire control system, the mounting platform interfaces to the weapon system and the UGV will be designed to meet the needs of the integration effort.

Select/Design User Interface: Concurrent to platform interface design, a user interface hardware setup will be designed to allow a soldier to monitor and control the system. The "soldier-in-the-loop" will be in control of all weapons firing. Note, SPAWAR has indicated their involvement also in completing this task.

Develop Software Package: Concurrent to all subsystem design and selection efforts, a software package will be developed. This software interface package will integrate the user interface, a UGV control, and a fire control system into the interface hardware. The fire control system will have sub-components including the target sensing and acquisition, aiming system control, and munitions launch control. Note, SPAWAR has indicated their involvement also in completing this task. This will be done to ensure:

- Integration of the MS Weapon with SPAWAR Aiming Platform (i.e. pan/tilt mount) to achieve CONOPS-required targeting/ranging performance. Contractor is responsible for the aiming platform.
- Interfacing the MS FCU with SPAWAR fire sequence control – signal which munition/barrel to fire, rate of fire, etc.
- And conclude with the mounting of the weapon system on UGV and conduct of dry runs (i.e., shake-out) testing

Critical Design Review: MILESTONE

Produce or Acquire Necessary Components for Objective 2 Demonstration to include:

- Munitions
- Sensing and Targeting
- Launch Package
- Fire Control
- Platform Interfaces
- User Interface
- Software package

Test Individual Components:

As Required, Revise/Modify System & Component Designs (i.e., Modifications to Preliminary Design):

Integrate Demonstration System

All hardware, software, and documentation resulting from Objective 2 transitions to the government.

3.4 Task 4 – Live Fire Demonstration for Potential End Users

Live Fire Test of Objective 2 Demonstration System: Upon completion of system integration, the full system will be live fire tested to ensure the appropriate results prior to demonstration. During testing, data will be taken for final system analysis, this data will include information such as projectile velocity, dispersion patterns, effect radius, recoil levels, etc.

Demonstrate: The Objective 2 demonstration will show the full, integrated system firing from a stationary position while targeting moving objects. The system will also fire at targets which are representative of that which is encountered when fighting insurgency. This demonstration should be attended by all decision making personnel from the customer and user agencies, as well as representatives of the major services and other government agencies with fixed and mobile asset protection and personnel defense needs. **MILESTONE & DELIVERABLE**

- 3.4.1 Analyze test data from demonstration, identify any required system changes, and develop appropriate design modifications **DELIVERABLE**

Document System Design/Architecture: At the completion of the SBIR Phase II Metal Storm will move into the documentation phase. The first effort in this phase will be to complete the documentation of the system design, which will include the Milestone CONOPS, the system architecture, and interface documentation.

Document Test Data and Analysis: Concurrent to the documentation of the system design, documentation, and analysis of the data from the system tests will be compiled. The data to be reported from the system tests will also be determined by Metal Storm and the customer.

Document Resource/Cost Strategy for Phase III (production, deployment, and logistics), and Deliver All Documentation: Following completion of the documentation for the system design and test data and analysis, the resource and cost strategy for an SBIR Phase III will be developed and delivered with the rest of the SBIR Phase II documentation. The delivery of all documentation will be a final Milestone. This will signal the end of the SBIR Phase II.

3.5 Other Deliverables:

- Progress Report
- Final Report

